DOES: Selecting A Subject Diagnosis

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Departmental Order Entry Sets (DOES) are groupings of orders by diagnosis/disease for use in a computerized order entry system. Order sets have been shown to save time, reduce cost and standardize care within an institution[1]. All diagnoses/diseases may not be equally suitable to be subject matter for an order entry set. A DOES should consist of a limited number of orders, require few modifications, and represent a relatively common diagnosis. An example of a suitable subject diagnosis for a Medicine DOES is community-acquired pneumonia, which is a relatively common diagnosis with a limited number of predictable orders. Lung cancer may not be as suitable for a Medicine DOES because it is not a relatively common diagnosis, and treatment orders for lung cancer are dependent on several variables including type, stage and prior therapy. In our study we compare and contrast four different approaches for selecting subject diagnoses for DOES: 1.)Departmental/Institutional Need, 2.)Admitting Diagnosis, 3.)Discharge Diagnosis, 4.)Physician Opinion. The latter three approaches are measures of real and perceived incidence.

Subject diagnoses selected on the basis of Departmental need can reflect a need to standardize care, control cost, reduce length of stay, or meet educational objectives. Admitting and discharge diagnoses while measuring real disease incidence are influenced by very different processes: admitting and discharge billing. Physician opinion on suitable subject diagnoses can be biased by prior experience (i.e., training, caseload, hospital) and interests (e.g., postgraduate plans). The Department of Medicine at Mount Sinai Medical Center employed a method based on departmental/institutional need and opinion. Diagnoses were chosen based on housestaff interest. Once a diagnosis was identified, housestaff would then suggest orders for management and therapy after undertaking an extensive review of the literature. This process assisted in fulfilling research requirements and thus meeting a departmental/institutional need.

In our study we compared the diagnoses selected by the Department of Medicine to that of admitting statistics, discharge statistics, and physician opinion (housestaff opinion). To evaluate physician opinion we distributed a survey to all housestaff who were doing their Medicine rotation block at Mount Sinai Medical Center. The study was undertaken from July, 1996 to November, 1996 and involved an average of at least 18 housestaff per block and an approximate average of 450 patients per block on 3 General Medicine Wards. The survey asked housestaff to list in order the top ten principal diagnoses they encountered without referring to any written aids such as sign out sheets or inpatient index cards. To account for bias, we requested information on level of training (e.g. PGY I, II, III), previous and next rotation, and postgraduate subspecialty plans if any. Statistics on principal admitting and discharge diagnosis were obtained from the Department of Medical Records. The Department of Medical Records derives these statistics from chart review and discharge summaries.

The Department of Medicine is presently evaluating diagnoses for DOES. We surveyed approximately 50 housestaff admitting 2,000 patients over a period of 5 blocks. Preliminary analysis of admitting and discharge diagnosis data for the same patients indicates that asthma, congestive heart failure and pneumonia were among the most common admitting and discharge diagnoses. A detailed analysis of the housestaff survey and the admitting and discharge data is being finalized.

Potentially DOES can reduce cost and standardize care by influencing management choices. DOES can also educate housestaff (as well as attendings) by indicating preferred treatments. However, for DOES to realize its full potential, a methodological basis for selecting subject diagnoses needs to be identified. Our study is a first step towards this process.

[1] Sittig DF, Stead WW. Computer-based physician order entry: the state of the art. J-Am-Med-Inform-Assoc.: 1994 Mar-Apr; 1(2): 108-23

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